

What is claimed is:

1. A method for controlling a valve lift of discretely adjustable inlet valves in a multi-cylinder internal combustion engine, the operation of which is regulated by an electronic operation control unit, comprising adjusting the valve lift for a first section of cylinders and, after a delay, for a second section of cylinders, to ensure a valve lift switchover of inlet valves.

2. The method according to claim 1, wherein the valve lift is adjusted for the cylinders individually or in groups consecutively.

3. The method according to claim 2, wherein the valve lift is first adjusted for a first half of the cylinders and then for a second half of the cylinders.

4. The method according to claim 3, wherein the adjustment of the valve lift for the first section of cylinders is performed such that combustion in each cylinder in the first section of cylinders takes place alternately with combustion in a cylinder in the second section of cylinders.

5. The method according to claim 1, wherein during adjusting the valve lift for the first and second section of cylinders, the torque of the internal combustion engine is regulated such that it stays at a value corresponding to a specified torque.

6. The method according to claim 5, wherein a change in torque produced by adjusting the valve lift is compensated by reducing an efficiency of at least some of the cylinders.

7. The method according to claim 6, wherein a change in the efficiency is achieved at least partially by a change in an ignition angle.

8. The method according to claim 6, wherein the change in efficiency is achieved at least partially by a change in an air/fuel ratio.

9. The method according to claim 6, wherein during the valve lift adjustment for the first section of cylinders, a throttle valve mounted in an intake tract of the internal combustion engine is adjusted such that the pressure in the intake tract changes toward a target value, at which all cylinders operate at optimum efficiency after the valve lift adjustment.

10. The method according to claim 9, wherein the valve lift for the second section of cylinders is adjusted at the latest once the cylinders have regained their optimum efficiency after the first valve lift adjustment.

11. The method according to claim 6, wherein the valve lift of the inlet valves is switched over from a low to high value, and during the valve lift adjustment for the first section of cylinders, a throttle valve mounted in an intake tract of the internal combustion engine is adjusted in a close direction and at a same time at least the first section of cylinders is operated at reduced efficiency.

12. The method according to claim 6, wherein the valve lift of the inlet valves is switched over from a high to low value, and before the valve lift adjustment for the first section of cylinders, a throttle valve mounted in an intake tract is adjusted in an open direction and all cylinders are operated at reduced efficiency, and the valve lift adjustment for the first section of cylinders is effected, once the pressure in the intake tract has

reached a value at which an efficiency close to optimum efficiency for all cylinders is achieved by the valve lift adjustment.

13. The method according to claim 7, wherein the efficiency $EFF_IGA_{gr_N}$ of the cylinders with high valve lift dependent on the ignition angle, which is necessary for a valve lift adjustment of the first section of cylinders at neutral torque, is constantly calculated and compared with efficiency $EFF_IGA_MIN_{gr_N}$ with a minimum ignition angle, the comparison producing a criterion for an option of valve lift adjustment at neutral torque.

14. The method according to claim 13, wherein if the difference between efficiency $EFF_IGA_{gr_N}$ and efficiency $EFF_IGA_MIN_{gr_N}$ is less than a threshold value during a required valve lift switchover, there is either no valve lift adjustment at this point or a valve lift adjustment takes place for a reduced number of cylinders.

15. The method according to claim 7, wherein the efficiency $EFF_IGA_{kl_N}$ of the cylinders with low valve lift dependent on the ignition value, which is necessary for the valve lift adjustment of the first section of cylinders at neutral torque, is constantly calculated and compared with efficiency $EFF_IGA_BAS_{kl_N}$ having a base ignition angle, the comparison producing a criterion for the option of valve lift switchover at neutral torque.

16. The method according to claim 15, wherein if the difference between efficiency $EFF_IGA_BAS_{kl_N}$ and efficiency $EFF_IGA_{kl_N}$ is less than a threshold value during a required valve lift switchover, there is either no valve lift switchover at this point or a valve lift adjustment takes place for a reduced number of cylinders.